SDH 2023-24 Farm Performance Summary

Strong pasture growth in autumn 2023 resulted in a higher than targeted APC across the farm going into winter (Figure 1). The decision was made to keep a mob of dry cows on farm for 10 days after dry-off to graze some of higher mass paddocks before they headed to the support block to be wintered on baleage. Above average growth through winter (Figure 2) resulted in pre-calving average pasture cover ranging between 2600 and 2680 kg DM/ha (Figure 1). The higher APC through spring meant less supplementary feed was required for milking cows before balance date.

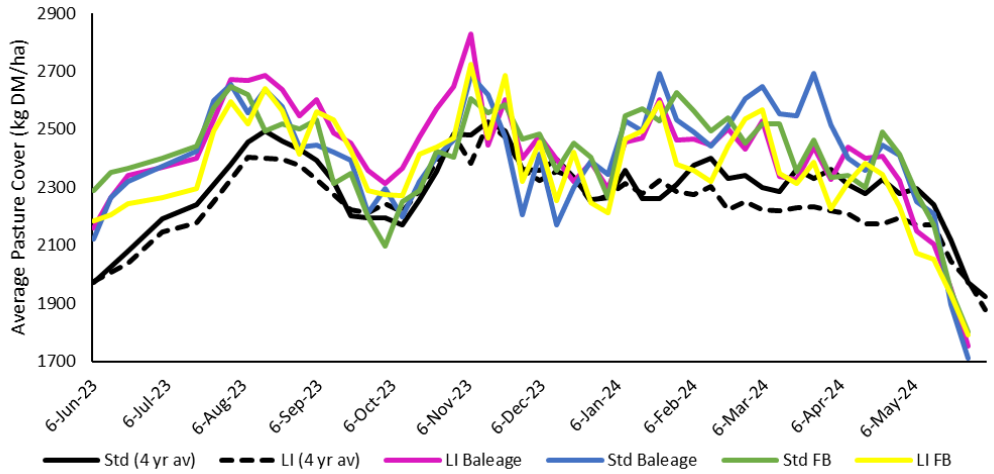


Figure 1: Weekly average pasture cover for each farmlet compared to the 4-year average

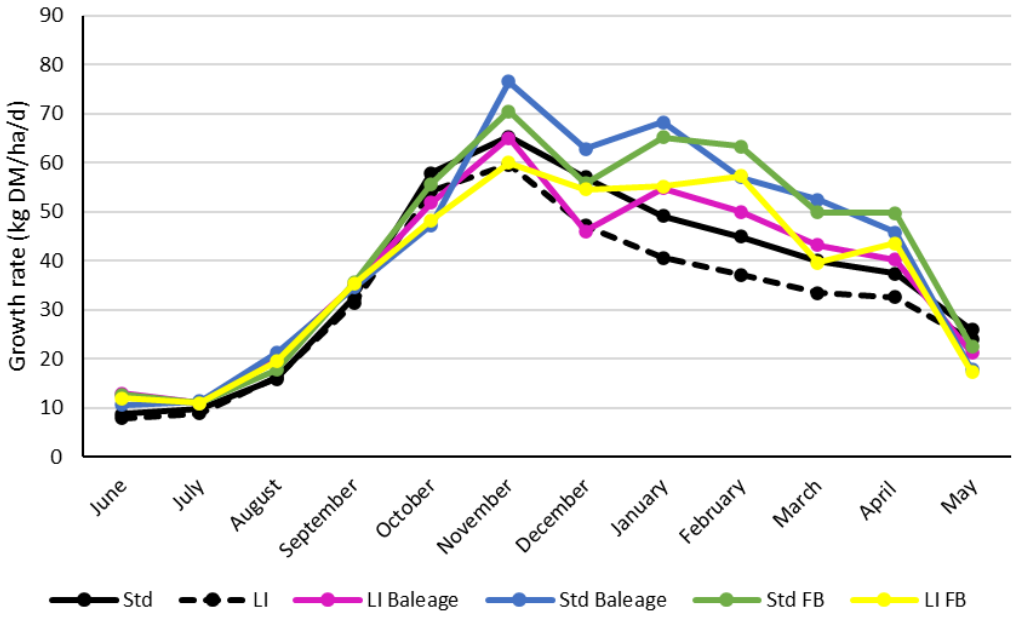


Figure 2: Average monthly pasture growth rate (from plate meter data) for each farmlet compared to the 4-year average

Soil temperatures through the second half of the season were lower than the 2022-23 season (Figure 3) and while regular rainfall (Figure 4) was frustrating for scheduling conservation it did result in consistent growth through Jan-April (Figure 2). Cold wet conditions through May saw a

rapid drop in APC and dry off covers were below the 1850 to 1900 kg DM/ha target which will put extra pressure on the farm this spring.

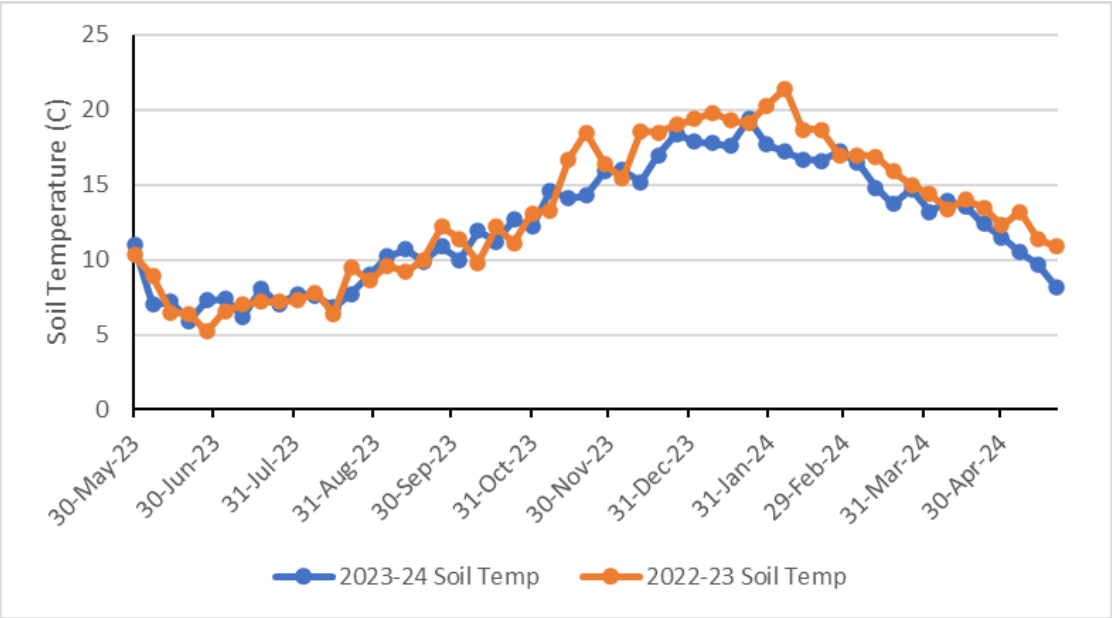


Figure 3: Weekly soil temperature compared to the 2022-23 season

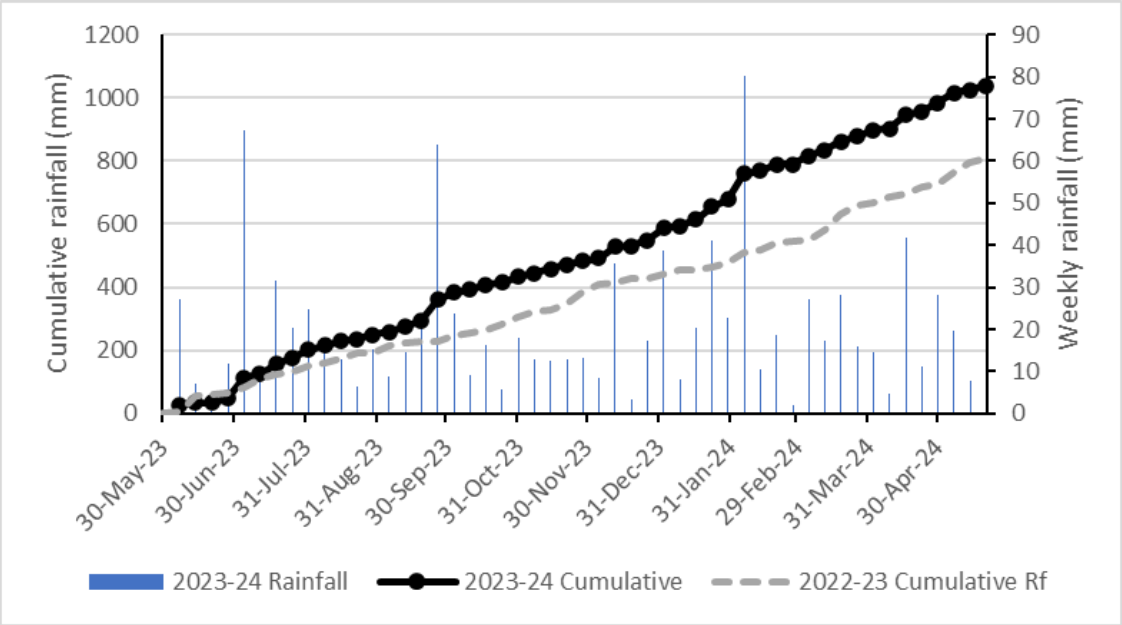


Figure 4: Weekly rainfall totals and cumulative rainfall for the 2023-24 season compared to the 2022-23 season.

The farm experienced two significant floods during the 2023-24 season. The first occurred in July and required one mob of baleage wintered cows to be brought back from the support block for a short period. The second in September occurred just as we were getting to the end of the first round on the milking platform. Luckily we had sufficient warning to be able to graze off some of the high mass paddocks on the flats before it flooded, however the event did negatively impact early season milk production (Figure 5).

Despite the disrupted start to the season milk production was up 3.8% on the 2022-23 season which was the previous highest (Figure 5). Average milk solids per cow supplied to Fonterra was 486 kg based on peak cow numbers. The improvement in production was seen in the second half of lactation with higher per cow production and more cows in milk for longer.

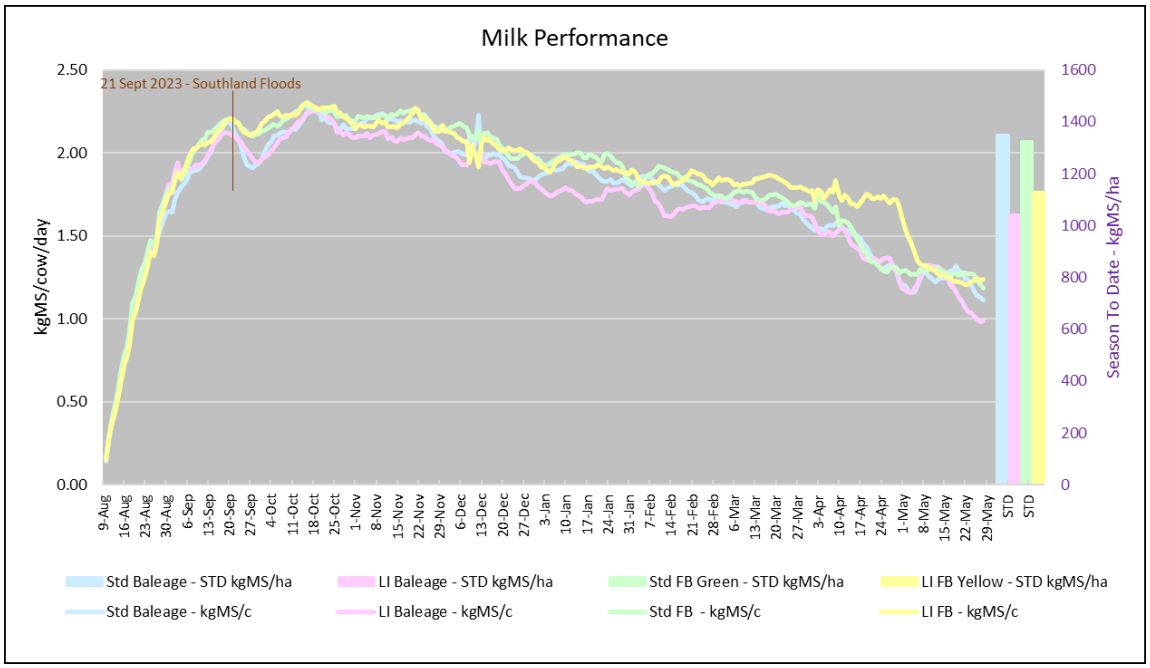


Figure 5: Average weekly milksolids per cow for each farmlet for the 2023-24 season

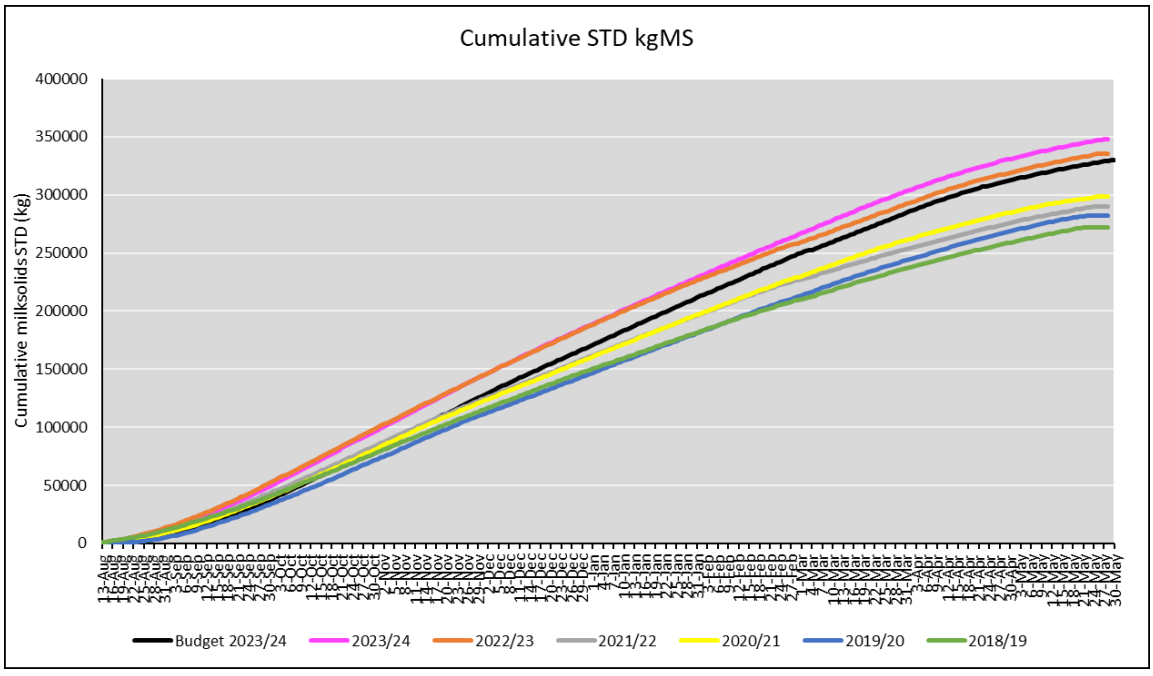
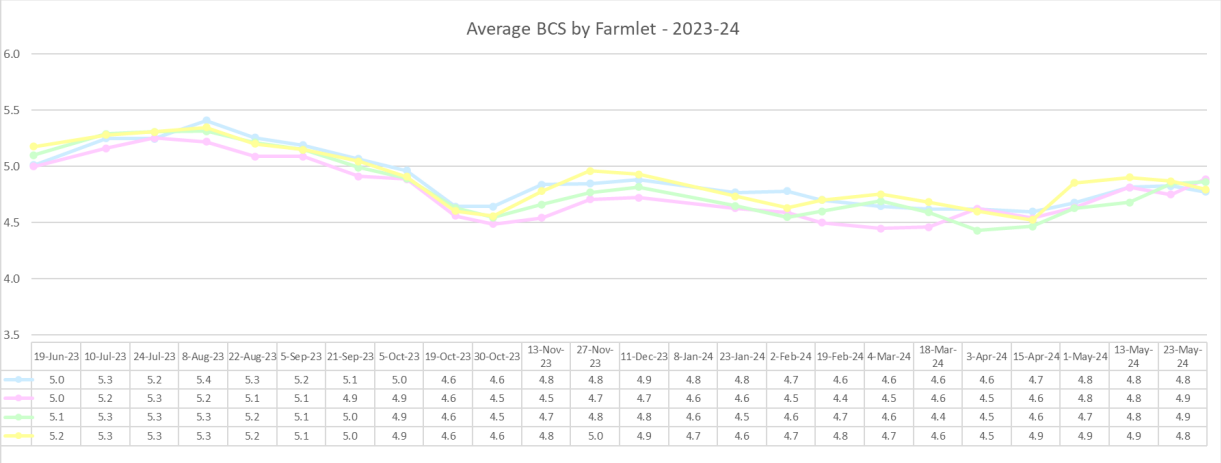


Figure 6: Cumulative season to date milksolids supply to Fonterra since 2018-19

It was encouraging to see higher peak milk production from the herds wintered on fodder beet following the change in management. For the 2023 winter the milking cows and R2 heifers/dries started transitioning to fodder beet in early May. Following dry off transitioning continued up to their winter allocation of 9.5 kg DM/cow/day of fodder beet. Cows were transitioned off fodder beet onto pasture and baleage once a week when they were approximately 4 weeks before

expected calving date. All cows were drafted into the springer mobs 2 weeks before their expected calving date. The cows wintered on fodder beet calved in better average BCS than those wintered on baleage (Figure 7). Significant variation in baleage quality impacted BCS gain in these mobs.

The most challenging system to manage during the 2023-24 season was the LI Baleage herd. The lower effective stocking rate once all paddocks were available for grazing, when the winter grass paddocks were back in the rotation, resulted in more frequent pasture surpluses for conservation. Management of pre-grazing mass and timing of conservation to get surplus paddocks off and back in the rotation were two factors that affected the performance of this system.



19-Jun-23	10-Jul-23	24-Jul-23	8-Aug-23	22-Aug-23	5-Sep-23	21-Sep-23	5-Oct-23	19-Oct-23	30-Oct-23	13-Nov-23	27-Nov-23	11-Dec-23	8-Jan-24	23-Jan-24	2-Feb-24	19-Feb-24	4-Mar-24	18-Mar-24	3-Apr-24	15-Apr-24	1-May-24	13-May-24	23-May-24
5.0	5.3	5.2	5.4	5.3	5.2	5.1	5.0	4.6	4.6	4.8	4.8	4.9	4.8	4.8	4.7	4.6	4.6	4.6	4.6	4.7	4.8	4.8	4.8
5.0	5.2	5.3	5.2	5.1	5.1	4.9	4.9	4.6	4.5	4.5	4.7	4.7	4.6	4.6	4.5	4.4	4.5	4.6	4.5	4.6	4.8	4.8	4.9
5.1	5.3	5.3	5.3	5.2	5.1	5.0	4.9	4.6	4.5	4.7	4.8	4.8	4.6	4.5	4.6	4.7	4.6	4.4	4.5	4.6	4.7	4.8	4.9
5.2	5.3	5.3	5.3	5.2	5.1	5.0	4.9	4.6	4.6	4.8	5.0	4.9	4.7	4.6	4.7	4.8	4.7	4.6	4.5	4.9	4.9	4.9	4.8

Figure 7: Average fortnightly BCS for each herd throughout the season

Milk urea concentrations more than doubled between the start and end of the season (Figure 8). The high concentration in late lactation indicates surplus nitrogen in the diet and is likely to increase urinary N excretion and thus the risk of nitrate leaching through autumn and winter.

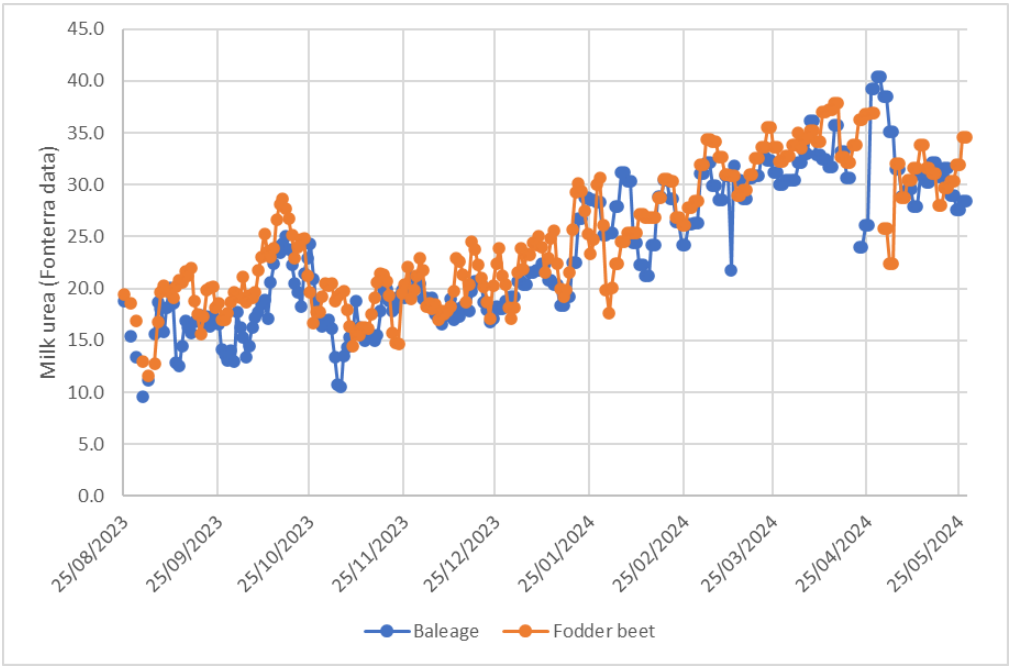


Figure 8: Milk urea concentrations from the fodder beet and baleage vats through the season

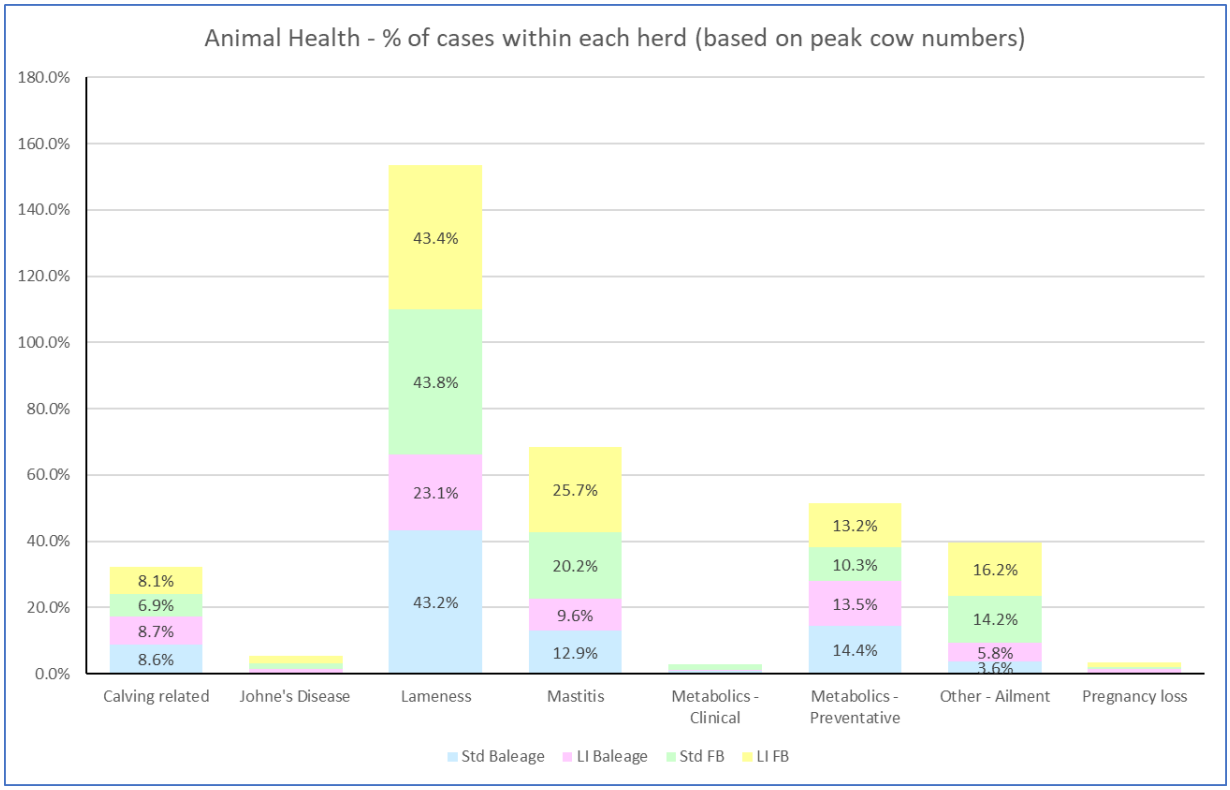


Figure 9: Animal health summary for each herd.

Lameness was a significant issue across the farm this season (Figure 8), particularly later in lactation. The most common cause across all farmlets was white line, followed by bruising (fodder beet herds only), and infection between the claws (all herds).

An interesting observation was the higher somatic cell count in the fodder beet herds vat and corresponding higher incidence of mastitis in these herds as well.

Proactive management of animals around calving reduced the incidence of clinical milk fever but this resulted in up to 14% of cows receiving preventative treatment (Figure 9).

Fodder beet cows were more likely to experience random health events with pink eye being an issue during winter.

The LI FB herd show significant improvement in profit this season compared to previous seasons where it was consistently the least profitable. We attribute this to better per cow production increasing revenue plus the lower requirement for inshed supplementary feed reducing costs (Table 1).

Table 1: Physical and financial performance summary by farmlet

	Std Baleage	LI Baleage	Std FB	LI FB
Wintering system	Baleage	Baleage	Fodder beet	Fodder beet
Wintered Number	141	218	242	141
Peak Cows	139	208	233	136
BW	219	216	220	220
PW	267	262	262	263
Liveweight	517	513	512	516
Planned start calving	10 Aug	10 Aug	10 Aug	10 Aug
Total area (ha)	49.3	93.6	86.9	60.8
Wintering area (ha)	2.9 + 4.8 at support block	11.6	11.0	4.3
Production				
Days in milk	264	266	262	266
kg MS/ total ha including wintering	1350	992	1325	1075
kg MS/milking platform ha	1435	1132	1516	1156
kg MS/peak cows	479	446	494	480
kg MS to Dec (%)	54	57	54	56
kg MS/kg LW (%)	93	87	96	93
Pasture grown (t DM/ha)	15.5	13.4	15.1	13.4
Fertiliser N applied (av kg/ha)	155	50	153	50
Effluent N applied (av kg/ha)	17.5	19.8	17.9	18.2
% farm mown (topped + conserved)	180	191	137	170
% farm conserved	93	102	89	67
Baleage made (kg DM/cow)	407	475	353	446
Supplements fed (kg DM/cow)				
Baleage	76	48	88	44
Silage	198	206	247	231
Inshed	418	412	459	389
Total supplement	692	666	795	664
Reproduction (10-week mating)				
3 wk submission Rate (%)	88	95	92	96
6 wk in calf (Fert Focus) (%)	76	74	79	84
Not in calf (Fert Focus) (%)	12	12	12	9
Financial				
Operating profit ($ha)	$2,788	$1,383	$2,586	$2,470
Operating expenses ($/kg MS)	$6.70	$6.73	$5.77	$6.30